

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (currently amended) A ~~low-allergenic, rising food~~ flour, which is derived from the seed of a plant expressing in said seed (i) a gene coding for ~~[[the]]~~ transglutaminase enzyme and (ii) one or more genes coding for wheat storage proteins, wherein said one or more wheat storage proteins comprise the ~~[[a]]~~ preserved C-terminal motif LKVAQAQLAAQ-LPAMCR (SEQ ID NO: 11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2; ~~[[and]]~~ wherein said one or more genes are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten; ~~[[.]]~~ wherein said flour has lower allergenicity than wheat flour; and wherein said plant is a cereal or a leguminosa provided that said plant is not wheat.

2. (currently amended) The ~~feed~~ flour of Claim 1 wherein said one or more wheat storage proteins are modified by mutagenesis to lower allergenicity of amino acid sequences for food allergies to gluten and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PYPQPQLPY, LQLQPFQPQ-PQLPY, QQGYPTSPQQSG, QQGYPTS, PFSQQQQQ, QSEQSQPFQPPQ, and QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

3. (currently amended) The ~~feed~~ flour of Claim 2 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFQPQ-PQLPY, amino acids in positions 5 and 8 for QQGYPTSPQQSG, amino acids in positions 5 and 8 for QQGYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, amino acids in positions 4 and 6 for QSEQSQPFQPPQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

4. (currently amended) The ~~feed~~ flour of Claim 1 wherein said the ~~cereal~~ plant is rice,

soybean or corn.

5. (withdrawn-currently amended) A transgenic plant expressing in seed (i) a gene coding for [[the]] transglutaminase enzyme and (ii) one or more genes coding for wheat storage proteins, wherein said one or more wheat storage proteins comprise the [[a]] preserved C-terminal motif LKVAQAQQLAAQLPAMCR (SEQ ID NO: 11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2; [[and]] wherein said one or more genes are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten; wherein flour made from said seed has lower allergenicity than wheat flour ~~and is rising~~; and wherein said plant is a cereal or a leguminosa provided that said plant is not wheat.

6. (withdrawn-currently amended) The plant of Claim 5 wherein said one or more wheat storage proteins are modified by mutagenesis to lower allergenicity of amino acid sequences for food allergies to gluten and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PYPQPQLPY, LQLQPFQPQ-PQLPY, QQGYYPTSPQQSG, QQGYYPTS, PFSQQQQQ, QSEQSQQPFQPPQ, and QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

7. (withdrawn) The plant of Claim 6 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFQPQLPY, amino acids in positions 5 and 8 for QQGYYPTSPQQSG, amino acids in positions 5 and 8 for QQGYYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, or amino acids in positions 4 and 6 for QSEQSQQPFQPPQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

8. (withdrawn-currently amended) The plant of Claim 5[[.]] wherein said plant is rice, soybean or corn.

9. (withdrawn-currently amended) A seed produced by the plant of Claim 5 wherein said seed expresses (i) a gene coding for [[the]] transglutaminase enzyme and (ii) one or more genes coding for wheat storage proteins; wherein said one or more wheat storage proteins comprise the [[a]] preserved C-terminal motif of LKVAQAQLAAQLPAMCR (SEQ ID NO: 11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2; [[and]] wherein said one or more genes are optionally modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten; wherein flour made from said seed has lower allergenicity than wheat flour-and-is-rising; and wherein said plant is a cereal or a leguminosa provided that said plant is not wheat.

10. (withdrawn-currently amended) A process for the production of flour ~~from the seeds~~ of Claim ~~[[9]] 1~~, the process comprising the step of milling [[said]] seeds which express (i) a gene coding for transglutaminase enzyme and (ii) one or more genes coding for wheat storage proteins; wherein said one or more wheat storage proteins comprise the preserved C-terminal motif of LKVAQAQLAAQLPAMCR (SEQ ID NO: 11) and are selected from the group consisting of 1Bx7, 1By9, 1Dx5, 1Dy10, 1Ax2, 1Bx17, 1Ax1, 1Dy12, and HMW2; wherein said one or more genes are modified by mutagenesis to eliminate allergenic amino acid sequences for food allergies to gluten; and wherein said seed is produced by a plant which is a cereal or a leguminosa provided that said plant is not wheat.

11. (withdrawn-currently amended) A process for producing a baked product, the process comprising: the steps of admixing the flour as defined in Claim 1 with a suitable amount of yeast and water to obtain dough, allowing said dough to rise, flour to raise and baking the leavened obtained dough.

12. (withdrawn) A baked product obtained by the process of Claim 11.

13. (new) The flour of Claim 2 wherein said plant is rice, soybean or corn.

14. (new) The flour of Claim 3 wherein said plant is rice, soybean or corn.

15. (new-withdrawn) The process according to Claim 10 wherein said plant is rice, soybean or corn.

16. (new-withdrawn) The process according to Claim 11 wherein said plant is rice, soybean or corn.

17. (new-withdrawn) The process according to Claim 15 wherein said one or more wheat storage proteins are modified by mutagenesis to lower allergenicity of amino acid sequences for food allergies to gluten and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PYPQPQLPY, LQLQPFQPQLPY, QQGYPTSPQQSG, QQGYPTS, PFSQQQQQ, QSEQSQQPFQPQ, and QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

18. (new-withdrawn) The process according to Claim 17 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFQPQLPY, amino acids in positions 5 and 8 for QQGYPTSPQQSG, amino acids in positions 5 and 8 for QQGYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, amino acids in positions 4 and 6 for QSEQSQQPFQPQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

19. (new-withdrawn) The process according to Claim 16 wherein said one or more wheat storage proteins are modified by mutagenesis to lower allergenicity of amino acid sequences for food allergies to gluten and the sequences to be modified are selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PYPQPQLPY, LQLQPFQPQLPY, QQGYPTSPQQSG, QQGYPTS, PFSQQQQQ, QSEQSQQPFQPQ, and QXPQQPQQF (SEQ ID NOS: 36-44, respectively).

20. (new-withdrawn) The process according to Claim 19 wherein the mutagenesis is directed to amino acid in position 6 for PFPQPQLPY, amino acid in position 4 for PQPQLPYYPQ, amino acid in position 6 for PYPQPQLPY, amino acid in position 10 for LQLQPFPQPQLPY, amino acids in positions 5 and 8 for QGGYYPTSPQQSG, amino acids in positions 5 and 8 for QGGYYPTS, amino acids in positions 4, 5 and 7 for PFSQQQQQ, amino acids in positions 4 and 6 for QSEQSQPFQPFQ, or amino acid in position 4 for QXPQQPQQF (SEQ ID NOS: 36-44, respectively).